

TABLE 57

**Worldwide, domestic, and foreign R&D employment, by sex, industry, and company size: 2019**

(Thousands)

Industry and company size	NAICS code	Worldwide			Domestic			Foreign		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
All industries	21–23, 31–33, 42–81	2,676	1,931	745	1,832	1,344	488	844	587	256
Manufacturing industries	31–33	1,409	1,049	360	962	720	241	447	329	119
Food	311	35	19	16	23	13	10	12	6	6
Beverage and tobacco products	312	8	5	3	6	4	2	3	1	1
Textile, apparel, and leather products	313–16	8	5	3	7	4	3	1	1	1
Wood products	321	3	3	*	3	2	*	*	*	*
Paper	322	7	6	2	5	4	1	2	1	*
Printing and related support activities	323	5 i	3 i	1 i	5 i	3 i	1 i	* i	* i	* i
Petroleum and coal products	324	9	6	3	6	5	2	3	1	1
Chemicals	325	255	135	121	186	99	86	70	35	34
Basic chemicals	3251	17	11	6	12	8	3	6	3	2
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	10	8	3	6	5	1	4	3	1
Pesticide, fertilizer, and other agricultural chemicals	3253	10	6	3	7	5	3	2	2	1
Pharmaceuticals and medicines	3254	184	88	96	139	68	71	45	20	25
Soap, cleaning compound, and toilet preparation	3256	17	8	8	11	6	5	6	3	3
Paint, coating, adhesive, and other chemicals	3255, 3259	17	12	5	10	8	3	7	5	2
Plastics and rubber products	326	31	25	6	25	20	5	6	5	1
Nonmetallic mineral products	327	7 i	6 i	1 i	7 i	6	1 i	1 i	1 i	* i
Primary metals	331	9	8	1	8	7	1	1	1	*
Fabricated metal products	332	36	32	4	34	30	4	2	2	1
Machinery	333	138	118	20	95	82	13	43	36	7
Agricultural implement	33311	22	19	3	13	11	1	9	7	2
Semiconductor machinery	333242	20	17	3	12	11	2	8	7	1
Engine, turbine, and power transmission equipment	3336	12	10	2	7	6	1	5	4	1
Other machinery	other 333	84	72	13 i	63	54	9	22	18 i	4 i
Computer and electronic products	334	446	356	90 i	264	212	52	182	144 i	38 i
Communications equipment	3342	72	60	12	40	33	7	32	27	5
Semiconductor and other electronic components	3344	181	144 i	37 i	95	77 i	19 i	85	67 i	18 i
Navigational, measuring, electromedical, and control instruments	3345	110	85 i	25 i	75	58 i	17 i	35 i	26 i	9 i
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	24 i	16 i	8 i	16 i	11 i	5 i	8 i	5 i	3 i
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	40 i	33 i	7 i	33	27 i	6 i	7 i	6 i	2 i
Other measuring and controlling device	other 3345	46	35	11	26	20	6	20	15	5
Other computer and electronic products	other 334	84	67	16	54	43	10	30	24 i	6 i
Electrical equipment, appliances, and components	335	48	37	10 i	25	20	5	23 i	18 i	5 i
Transportation equipment	336	254	211	43	183	152	30	72	59	12
Motor vehicles, bodies, trailers, and parts	3361–63	169	140	29	108	90	18	61	50	11

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Aerospace products and parts	3364	70	59	11	61	52	9 i	8	7	1
Aircraft, aircraft engine, and aircraft parts	336411-13	62	53	9	54	46 i	8 i	8	7	1
Guided missile, space vehicle, and related parts	336414-15, 336419	7	6	1	7	6	1	*	*	0
Military armored vehicle, tank, and tank component	336992	1	1	*	1	1	*	0	0	0
Other transportation	other 336	15	12	3	12	9	3	3 i	2 i	* i
Furniture and related products	337	4	3	1	4	3	1	*	*	*
Miscellaneous	339	104	71	33	78	54	24	26	17	9
Medical equipment and supplies	3391	82	55	27	59	40	19	23	15	8
Other miscellaneous manufacturing	3399	22	16	6	19	14	5	3	2	1
Nonmanufacturing industries	21-23, 42-81	1,267	882	385	870	624	247	396	259	138
Mining, quarrying, oil and gas extraction, and support activities	21	22 i	19 i	4 i	12	10	2	11 i	9 i	2 i
Utilities	22	0 - 35	0 - 35	*	0 - 23	0 - 23	*	0 - 12	0 - 12	*
Wholesale trade	42	16	13	3	13	10 - 14	0 - 4	2	0 - 3	0 - 3
Electronic shopping and electronic auctions	454111-12	42 - 114	12 - 102	0 - 40	38 - 64	12 - 64	0 - 27	3 - 52	0 - 38	0 - 19
Transportation and warehousing	48-49	19 i	14 i	4 i	18 i	14 i	4 i	1 i	1 i	* i
Information	51	533	396	137	359	270	89	174	126	48
Publishing	511	181	129	52 i	110	81 i	29 i	71	48	23 i
Newspaper, periodical, book, and directory publishers	5111	1	*	*	1	*	*	*	*	*
Software publishers	5112	180	128	52 i	109	81 i	29 i	71	48	23 i
Telecommunications	517	20	15 i	5	19	14 i	5	1	1	*
Data processing, hosting, and related services	518	201	151	51	126	94	32	75	57 i	19 i
Other information	other 51	130	101	29	104	80	23	27	21	6
Finance and insurance	52	71	45	26	54	33	21	17	11	5
Real estate and rental and leasing	53	4	3	1	4	3	1	*	*	*
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	*	*	*	*	*	*	*	*
Other real estate and rental and leasing	other 53	4	2	1	3	2	1	*	*	*
Professional, scientific, and technical services	54	441	274	167	299	198	101	142	76	66 i
Architectural, engineering, and related services	5413	59	46	13	58	45	13	1	1	*
Computer systems design and related services	5415	154	119	35	99	76	23	55	43	12
Scientific research and development services	5417	178	76	102	98	48	50	80	28 i	52 i
Research and development in biotechnology	541711	59	26	33	30	14	17	29	12	17
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	110 i	48 i	62 i	59	32	27 i	51 i	16 i	35 i
Research and development in the social sciences and humanities	541720	9	3	7	9	3	7	*	*	*

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Other professional, scientific, and technical services	other 54	50	33	17	44	29	16	6	4	2
Health care services	621–23	12	6	6	12	6	6	*	*	*
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	38 - 88	12 - 78	0 - 40	39	12 - 40	0 - 27	0 - 49	0 - 38	0 - 19
All companies (number of domestic employees)	–	2,676	1,931	745	1,832	1,344	488	844	587	256
Small companies										
10–19 <sup>a</sup>	–	37	28	9	35	27	9	2	1	*
20–49	–	92	73	19	83	67	17	9	6	2
Medium companies										
50–99	–	95	73	22	85	65	20	10	8	2
100–249	–	150	117	33	127	100	27	23	16	6
Large companies										
250–499	–	130	99	30	105	80	25	25	19	5
500–999	–	134	101	32	100	76	24	34	26	8
1,000–4,999	–	454	334	121	305	225	80	149	108	40
5,000–9,999	–	280	193	87	182	127	55	97	65	32
10,000–24,999	–	465	307	158	267	181	87	198	127	71
25,000 or more	–	840	606	234	542	396	146	298	210	88

\* = amount &lt; 500 employees; i = &gt; 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

<sup>a</sup> The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.**Note(s):**

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

**Source(s):**

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2019.